

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Serial No: 10/575,599  
Filed: April 13, 2006  
Title: DISPERSE AZO DYESTUFFS  
.....

Art Unit: 1626  
Examiner: Fiona Powers

Hon. Commissioner of Patents & Trademarks  
Washington, D. C. 20 231

DECLARATION (Rule 132)

Sir:

I, Adrian Murgatroyd from Rossendale, UK, declare: I am a Chemical Engineer and a citizen of the United Kingdom, residing at Wed 9, 65929 Frankfurt am Main, Federal Republic of Germany.

Since completing my studies at the University of Exeter in the United Kingdom, I have been employed as a textile technician by Tootal Limited, Manchester, UK and as a development manager by ICI (subsequently Zeneca), Manchester, UK. The textile activities of Zeneca were taken over by BASF Aktiengesellschaft, Ludwigshafen, Germany, where I worked as a product manager and as a development manager. In October 2000 BASF transferred its activities in the textile dyestuff field to DyStar and since then I have been employed by DyStar Textilfarben GmbH & Co. Deutschland KG in Frankfurt, Germany as a product development manager for disperse dyes.

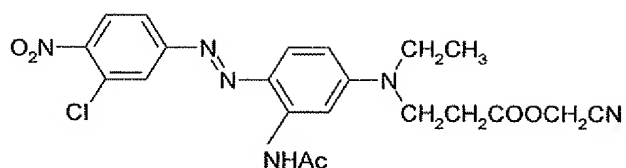
I have had adequate professional experience in the field to which patent application Serial No. 10/575,599, filed April 13, 2006, pertains and which was filed by Nigel Hall.

I further declare:

In order to demonstrate that the dyestuffs according to the present application are not obvious over the teachings of the prior art the tests described below have been carried out under my personal guidance and supervision.

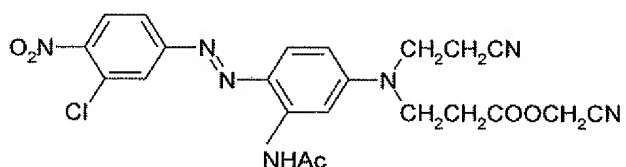
## I. DYESTUFFS

1. Dyestuff 1 of the formula



according to the present invention

2. Dyestuff 2 of the formula



according to Example 5 of US 4,119,624 ro Boyd et al. (prior art)

## II. PRODUCING OF THE DYEINGS

Dyeings of each of Dyestuff 1 and 2 were produced using a conventional exhaustion process as follows:

Substrate:	5.0 g of Polyester double pique (Toray)
Liquor ratio:	1:12
pH :	4.5 (acetic acid /sodium acetate)
Levelling agent:	1.0% by weight of Seragal P-LP (supplier DyStar)
Temp. x Time:	130°C x 60 min. (90 -- 130°C: 1.5°C/min.)
Aftertreatment:	Reduction clear

## III. DETERMINATION OF THE BUILD UP PROPERTIES

The color depths of the dyeings obtained according to II above were determined by measuring

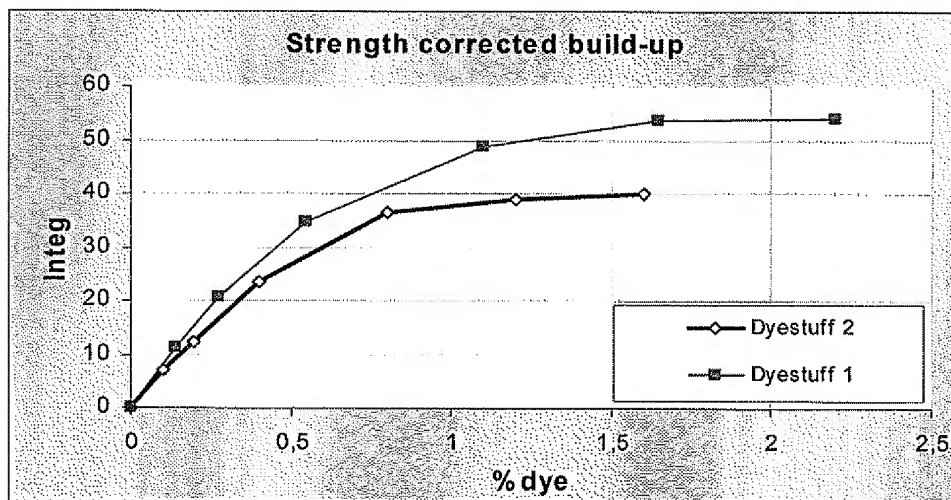
their remission in the visible range of from 400 to 700 nm and determining their overall remission, INTEG value, which is based on K/S value (Kubelka-Munk function) and described below.

$$\text{INTEG value} = \sum_{\lambda=400}^{\lambda=700} I_{\lambda} \cdot K/S_{\lambda} \cdot (x_{\lambda} + y_{\lambda} + z_{\lambda})$$

$I_{\lambda}$  : the spectral energy distribution of Illuminant

$x_{\lambda}$  ,  $y_{\lambda}$  ,  $z_{\lambda}$  : the color-matching functions

The following results were obtained:



#### IV. RESULTS

The results obtained clearly show strongly improved build-up properties of inventive Dyestuff 1 when compared to Dyestuff 2 according to prior art. This improvement could not at all be foreseen for a person skilled in the art and was thus unexpected and surprising.

I further declare that I understand the contents of this Declaration, that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both,

under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed at Frankfurt

This *20th* day of *November 2007*

.....*Adrian Murgatroyd.*.....  
(Adrian Murgatroyd)